



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,450	03/22/2005	Peter Kukla	013344-9054-00	9977
23409 7590 04/09/2007 MICHAEL BEST & FRIEDRICH, LLP 100 E WISCONSIN AVENUE Suite 3300 MILWAUKEE, WI 53202			EXAMINER CHIESA, RICHARD L	
			ART UNIT	PAPER NUMBER
			1724	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/506,450

Applicant(s)

KUKLA, PETER

Examiner

Richard L. Chiesa

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>September 1, 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The preliminary amendment filed on September 1, 2004 has been entered.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings filed on September 1, 2004 are accepted by the examiner.

Specification

4. The abstract of the disclosure is objected to because it contains the legal expressions "comprising" and "means". Correction is required. See MPEP § 608.01(b).

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

Art Unit: 1724

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The disclosure is objected to because of the following informalities: (A) The word --are-- should apparently be inserted between "regions" and "substantially" (page 3, ninth line). (B) The word "move" (page 12, ninth line) should apparently be changed to --more--. (C) Starting with the last paragraph on page 13, applicant should review the description of Figures 5 and 6 because there appears to be an inconsistency with the use of the reference numerals for the electrode and electrode body holder. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. Claims 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 29 recites the limitation "the tube" in the second line. There is insufficient antecedent basis for this limitation in the claim. Apparently, claim 29 should depend from claim 26, instead of claim 24.

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-10, 15, 19-21, and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 4,618,351 to Esper et al. Esper et al (note Figures 1 and 2) show an electrode support apparatus with an electrode 12 projecting out of an insulating body 13 having a protrusion 15 and a cylindrical portion 14 (note col. 2, lines 26-63) as claimed (35 USC 102b). It would appear that Esper et al may not explicitly refer to insulating body 13 as a mounting body. However, Esper et al do describe in col. 3, lines 18-24 that the electrode 12 is held in position by the insulator 13. Consequently, it is inherent or at least would have been readily obvious to one of ordinary skill in the art (35 USC 103a) in light of Esper et al's description that Esper et al's insulator is a mounting body.

11. Claims 11, 12, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esper et al in view of U.S. Patent No. 1,992,113 to Anderson. Esper et al, as described above in paragraph 10, disclose an electrode mounting apparatus substantially as claimed. Apparently, Esper et al may not disclose a plurality of equally spaced hollow conical protrusions. In any case, Anderson (note ref. num. 53, Figs. 1-7) teaches the well-known use of a plurality of equally spaced hollow conical protrusions on an electrode mounting apparatus for the purpose of

Art Unit: 1724

ensuring an effective electrical precipitation (note first column, lines 1-12) and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in the Esper et al electrode mounting apparatus.

12. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 12 and 11, respectively above, and further in view of U.S. Patent No. 2,705,544 to Richardson. The prior art, as described above in either one of paragraphs 10 and 11, discloses an electrode mounting apparatus substantially as claimed with the possible exception of rebated and tapered protrusions. Richardson (note Figs. 1-3) teaches the use of a rebated protrusion 64, 66 and a tapered protrusion 29 on an electrode mounting apparatus for the purpose of efficiently treating gases at both high pressures and high temperatures (note col. 1, lines 15-24). It would have been obvious to one having ordinary skill in the art to employ both rebated and tapered protrusions on either one of the prior art electrode mounting devices in order to enhance treatment of gases at high pressures and temperatures as taught by Richardson.

13. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esper et al in view of U.S. Patent No. 6,176,902 to Matsubara. Esper et al, as described above in paragraph 10, disclose an electrode mounting apparatus substantially as claimed with the apparent exception of single end mounting and corona electrode discharge. Matsubara (note ref. num. 7, Figs. 1-8, and col. 6, lines 4-21) teaches these well-known expedients in an electrode mounting device for the purpose of ensuring safe exhaust gas treatment and for this same reason

Art Unit: 1724

it would have been obvious to one of ordinary skill in the art to employ the expedients in the Esper et al electrode mounting apparatus.

14. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Esper et al in view of U.S. Patent No. 6,221,136 to Liu et al. Esper et al, as described above in paragraph 10, disclose an electrode mounting apparatus substantially as claimed with the apparent exception of a pollutant remover. However, Liu et al (note ref. num. 129, 132, Fig. 8, and col. 11, lines 25-51) teach the use of a pollutant remover in an electrode mounting apparatus for the purpose of facilitating the removal of suspended particles and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in the Esper et al electrode mounting device.

15. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esper et al in view of U.S. Patent No. 1,931,436 to Deutsch. Esper et al, as described above in paragraph 10, disclose an electrode mounting apparatus substantially as claimed with the apparent exception of a perforated tube around the discharge electrode. Deutsch teaches the well-known use of a perforated tube 14 around a discharge electrode 17 in an electrode mounting device for the purpose of facilitating particle collection (note page 2, lines 33-52). It therefore would have been readily obvious to one of ordinary skill in the art to employ a perforated tube around the discharge electrode in the Esper et al electrode mounting apparatus in order to ensure effective particle collection as taught by Deutsch.

Art Unit: 1724

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references have been cited as art of interest to show other electrodes and/or electrode mountings.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (571) 272-1154.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane S. Smith, can be reached at (571) 272-1166.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (571) 272-1700.

Facsimile correspondence must be transmitted through (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Chiesa
April 5, 2007

Richard L. Chiesa

**RICHARD L. CHIESA
PRIMARY EXAMINER
ART UNIT 1724**

April 5, 2007